Third United Nations International Conference on the Peaceful Uses of Atomic Energy

A/CONF.28/A.675
ROMANIA
February 1964
Original: FRENCH

Confidential until official release during Conference

Abstract

DETERMINATION OF THE DEFORMATION OF THE THERMAL NEUTRON SPECTRUM IN A MULTIPLYING LATTICE USING THE FREQUENCY CHARACTERISTIC METHOD*

I. Purica, N. Seferian and E. Răcătăianu
Atomic Physics Institute, Bucharest, Romania

The paper analyses the possibilities offered by the frequency characteristic method for determining the deformation of the thermal neutron spectrum in a multiplying lattice. Use is made of the P_1L_2 approximation.

The theoretical results are compared with experiments carried out on an enriched uranium-graphite subcritical assembly. Separation of the effect of absorption in the uranium on deformation of the neutron spectrum is achieved by substituting suitable absorbing and diffusing substances for uranium.

* Work carried out under International Atomic Energy Agency Research Contract 229/RB.